



Volunteer Lake Assessment Program Individual Lake Reports

PRATT POND, NEW IPSWICH, NH

MORPHOMETRIC DATA

Watershed Area (Ac.):	426	Max. Depth (m):	2.7	Flushing Rate (yr ⁻¹)	7.6
Surface Area (Ac.):	38	Mean Depth (m):	1	P Retention Coef:	0.59
Shore Length (m):	1,800	Volume (m ³):	136,500	Elevation (ft):	1235

TROPHIC CLASSIFICATION

Year	Trophic class
2004	MESOTROPHIC

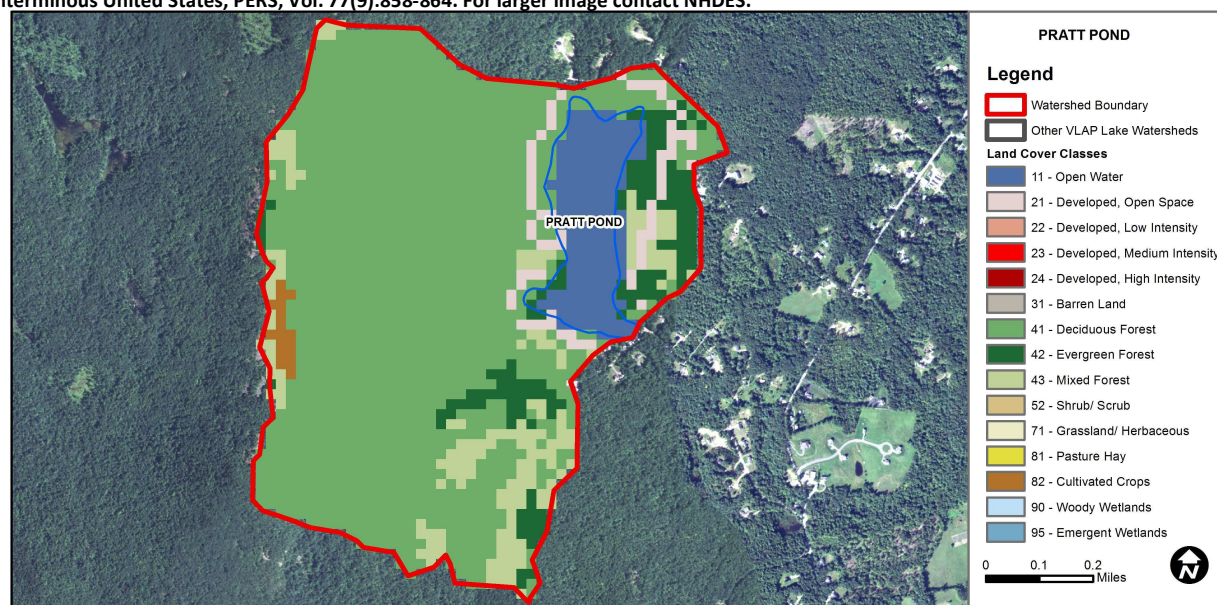
KNOWN EXOTIC SPECIES

The Waterbody Report Card tables are generated from the 2012 305(b) report on the status of N.H. waters, and are based on data collected from 2001-2011.

Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Good	>=5 samples and median is < threshold but > 1/2 threshold value.
	pH	Bad	>10%, with a minimum of 2, samples exceed criteria, with 1 or more by a large margin.
	D.O. (mg/L)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	D.O. (% sat)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	Chlorophyll-a	Very Good	>5 samples and median is < 1/2 threshold.
Primary Contact Recreation	E. coli	Very Good	All bacteria samples <75% of geometric mean criteria, but not enough to calculate geometric mean. Or, all bacteria samples are < single sample criteria and calculated Geometric means are less than geometric mean criteria.
	Chlorophyll-a	Very Good	At least 10 samples with 0 exceedances of criteria.

WATERSHED LAND USE SUMMARY

Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J., 2011. Completion of the 2006 National Land Cover Database for the Conterminous United States, PERS, Vol. 77(9):858-864. For larger image contact NHDES.



Land Cover Category	% Cover	Land Cover Category	% Cover	Land Cover Category	% Cover
Open Water	8.51	Barren Land	0	Grassland/Herbaceous	0
Developed-Open Space	3.71	Deciduous Forest	69.89	Pasture Hay	0
Developed-Low Intensity	0	Evergreen Forest	7.42	Cultivated Crops	0.93
Developed-Medium Intensity	0	Mixed Forest	9.33	Woody Wetlands	0
Developed-High Intensity	0	Shrub-Scrub	0	Emergent Wetlands	0



VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

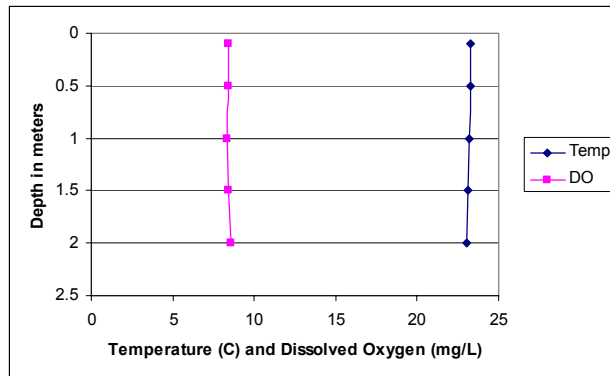
PRATT POND, NEW IPSWICH, NH

2012 DATA SUMMARY

OBSERVATIONS AND RECOMMENDATIONS (Refer to Table 1 and Historical Deep Spot Data Graphic)

- ♣ **CHLOROPHYLL-A:** Chlorophyll levels were relatively low and decreased from 2011. However, historical trend analysis indicates a significantly increasing (worsening) chlorophyll level since monitoring began.
- ♣ **CONDUCTIVITY/CHLORIDE:** Conductivity was very low and well below the NH lake median value.
- ♣ **E. COLI:** E. coli was well below state standards for public beaches and surface waters.
- ♣ **TOTAL PHOSPHORUS:** Epilimnetic phosphorus was relatively low and below the NH lake median. Historical trend analysis indicates relatively stable epilimnetic phosphorus level since monitoring began.
- ♣ **TRANSPARENCY:** Transparency was very good and the Secchi disk was visible on the pond bottom. Historical trend analysis indicates a stable transparency since monitoring began.
- ♣ **TURBIDITY:** Turbidity was low in 2012.
- ♣ **pH:** pH levels were lower than desirable and potentially critical to aquatic life.
- ♣ **RECOMMENDED ACTIONS:** Increase monitoring frequency to three times per summer to better understand summer water quality and historical trends. Educate watershed residents on ways to reduce stormwater runoff from their properties utilizing DES' "NH Homeowners Guide to Stormwater Management".

Dissolved Oxygen & Temperature Profile



Station Name	Table 1. 2012 Average Water Quality Data for PRATT POND							
	Alk.	Chlor-a	Cond.	E. Coli	Total P	Trans.	Turb.	pH
	mg/l	ug/l	uS/cm	#/100ml	ug/l	m	ntu	
						NVS		
Deep Epilimnion	1.9	2.79	17.8		8	2.50	0.75	6.29
South Inlet				20				

NH Median Values: Median values for specific parameters generated from historic lake monitoring data.

Alkalinity: 4.9 mg/L
Chlorophyll-a: 4.58 mg/m³
Conductivity: 40.0 uS/cm
Chloride: 4 mg/L
Total Phosphorus: 12 ug/L
Transparency: 3.2 m
pH: 6.6

NH Water Quality Standards: Numeric criteria for specific parameters. Results exceeding criteria are considered a water quality violation.

Chloride: < 230 mg/L (chronic)
E. coli: > 88 cts/100 mL – public beach
E. coli: > 406 cts/100 mL – surface waters
Turbidity: > 10 NTU above natural level
pH: 6.5-8.0 (unless naturally occurring)

HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation
Chlorophyll-a	Worsening	Data significantly increasing.
Transparency	Stable	Data not significantly increasing or decreasing
Phosphorus (epilimnion)	Stable	Data not significantly increasing or decreasing.

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